South Bank Site – Demolition of Riverside Buildings

Outline Method Statement

Document History

Document title: South Bank Site – Demolition of Riverside Buildings Outline Method Statement

Document reference: STDC-SIZ-SB-EWO-0002

Originated	**Reviewed**
Signature:	Signature:
Name: Darren Edmends	Name:

Revision History

Revision	Purpose	Status	Date of Issue	Originator	Reviewed
V0	Issued for Comment	Draft	14/09/2020	DE	
V1.1	Issued for Review	Draft	17/09/2020	DE	LCD

Contents

Appendices

1. Introduction

1.1. Purpose

The purpose of this document is to present an outline method statement for the demolition of a number of structures adjacent to the River Tees on the South Bank site area as part of the Teesworks (former the South Tees Development Corporation Area) regeneration project. It has been written to form guidance to inform of some of the key works and considerations anticipated as part of these works.

As part of the requirements of the Construction Design and Management (CDM) Regulations (2015) a Principal Contractor (PC) is to be appointed following contract award for these works. It should be recognised that the responsibility of demolition works shall lie with them and that their method statements shall govern the exact nature of the works and methods employed to bring about safe delivery of the contract. The works are to be carried out in line with all the PC's policies and procedures, including all relevant Task Specific Safe Working Procedures. Also the works will be carried out in line with all current relevant legislation and regulations and comply with BS6187:2011 Code of Practice for Full & Partial Demolition, including the below mentioned regulations:

- The Control of Substances Hazardous to Health Regulations 2002
- Health and Safety at Work Act 1974
- Control of Asbestos Regulations 2012
- Environmental Protection Act 1990
- As part of the works the PC will abide by the Teesworks site rules and receive a local induction to the site.

It is anticipated the works will be notifiable to HSE under the CDM 2015 regulations.

1.2. Site Location

The work site, South Bank Site (SBS) is located between the River Tees and the Darlington to Saltburn railway line, east of Smiths Dock Road, South Bank. This area of the Teesworks site was previously used to provide materials stockpiling and sorting for the former Cleveland North & South Iron and Steel works. The drawing entitled Teesworks South Bank Site Enabling Works – Demolitions Riverside Structures is contained in Appendix A and indicates the location of the structures with their basic details.

The buildings that are proposed for demolition within this permission consist of four adjacent structures and an outbuilding aligned along the riverside of the River Tees. All of the structures are of brick and concrete construction and are made up of former sub-stations and transformer pens, a pumping station and an ancillary out building. The structures historically served a number of purposes to the former steelworks site, but are now disused and redundant with some being in a poor state of repair.

1.3. Service Connections

Each of the buildings identified for demolition within this method statement will undergo a series of proof of service isolation from supplies that formerly served the buildings, be it electrical, water, gases or telecom supplies.

All electrical isolations, for each individual building, shall be traced back to and undertaken at the associated main substation switchgear supply points. Isolations are to be completed by STDC's nominated agent using suitably qualified and trained engineers who will issue the PC with written confirmation upon completion; these records will be held on site.

Water services are also to be isolated by STDC's nominated agent, isolations will be undertaken at the nearest valve chamber and again written confirmation will be supplied. Any drainage outlets or interceptors will be capped by the contractor as part of the works contract.

Isolation points will be fully identified and marked on a site drawing and clearly identified onsite.

1.4. Demolition Works Scope

The following scope of works is anticipated as part of the demolition works;

- Erection/installation of suitable measures to prevent the spread of debris into the river channel;
- Erection of temporary barriers/fencing and signage to provide a suitable perimeter around the building/structure to be demolished;
- Removal of Non-Notifiable asbestos containing materials;
- Tracing of existing services, followed by isolation and removal within the buildings. Any residual live underground services to be retained are to be identified and protected;
- General soft strip of buildings, where required, followed by demolition to top of floor slab;
- Crushing of demolition rubble to Class 6F2 specification and infill of voids where necessary;
- General levelling of site to existing site contours using site-won material;
- Removal of all arisings off-site including recycled metal, where not used above; and
- Removal of debris containment measures.

1.5. Building Description and Construction

In total there are four main structures and one minor building that are to be considered for demolition under this outline method statement and can be broken down and described as follows;

1. Riverside Transformer Pens - a single storey brick built building with concrete slab and beam roof, including brick blast walls forming the transformer pens. Approximate footprint is 18m long by 4m wide with a height of 2.5m.

2. Redundant Riverside 2.75kv Sub-station - a single storey brick built building with concrete slab and beam roof. Approximate footprint is 19m long by 9.3m wide with a height of 3m.
3. Redundant Outbuilding - a single storey brick built building with concrete slab and beam roof. Approximate footprint is 2.5m long by 1.7m wide with a height of 2.0m
4. Former Riverside Pump House Southern Structure - a single storey brick built building with steel beam and sheet roof. Approximate footprint is 33m long by 10m wide with a height of 2.5m.
5. Former Riverside Pump House Northern Structure - a single storey brick built building with concrete slab and beam roof. Approximate footprint is 24.7m long by 13.7m wide with a height of 2.5m.

2. Demolition Methods

2.1. General Demolition Approach

Prior to any works commencing, a refurbishment and demolition (R&D) asbestos survey will be undertaken on the existing structures to confirm the presence and location of asbestos containing materials within each structure. A specialist asbestos removal contractor will attend site (on a sub-contract basis) and remove any asbestos identified by the R&D survey. The asbestos will be bagged up, placed into a sealed waste skip and sent for disposal at a local registered waste handling facility. Site and task specific RAMS will be issued from the sub-contractor for the safe removal and disposal of the asbestos from site.

The first stage of the demolition will be ensuring the site is safe. The working area will be cleared of low-level vegetation, old industrial waste and rubbish, ensuring that all potential trip hazards are removed. Any hazards such as voids and manhole covers will be highlighted and cordoned off with using suitable barriers/cones and tape.

The onsite facilities team will confirm isolation of all services to the buildings which include electricity, gas, water and telecoms. STDC will confirm the isolation of their assets in writing and label accordingly (if necessary) prior to any work commencing.

All floor slabs and hardstanding's are to be retained at this stage. The site is to be left level on completion, with any voids backfilled utilising on site crushed material. The brick work to the buildings is to be crushed to a 6F2 specification and used to infill any voids or pipe channels. Existing roads and hardstanding areas, including site pathways and fence surrounding the site are to remain in place.

No remediation or sub-surface works are to be undertaken as part of this project.

2.2. Removal of Asbestos-Containing-Materials

(Non-Licensable only – Licensed Material to be removed by specialist subcontractor prior to demolition works mobilising).

At the time of writing, full R&D asbestos surveys had not been undertaken to all buildings. All asbestos removal activities are to be carried out in strict accordance with CAR 2012 and HSE Asbestos Essentials Task Sheets.

All operatives carrying out the asbestos removal works will require, as a minimum, to be trained to Cat B Non-Licensed Asbestos Removal Standard, have an approved Asbestos Medical and be correctly face-fitted for a Sundstrom Half Mask Respirator (in accordance with Asbestos Essentials EM2).

An Asbestos Waste Skip is to be suitably lined in 1000g polythene and located nearby the asbestos removal activity to minimise transit of materials.Disposal of material will be to an asbestos landfill cell nearby transported under a Section 62 Hazardous Waste Consignment (in accordance with Asbestos Essentials EM9).

2.3. Environmental Considerations

Due to the buildings location at riverside area of the River Tees high water mark, consideration will be given for measures to prevent debris from entering the river. The duration of the works at each building worksite is likely to be short, at no more than 3 to 4 days each to actual demolish the building to ground level (above the high water mark).

There are a range of methods that could be used to prevent debris from entering the river, and the Principal Contractor will be responsible for defining and implementing the final proposed solution. The most suitable method for this location is likely to be a scaffold based crash deck and screen. These temporary structures would need to be erected between the individual buildings and river, and lined with polythene and monoflex type sheeting to prevent debris entering the river. In the case of the pump houses the scaffolding will have to be footed on the river bank between the low and high water marks.

Drain points are to be identified prior to works commencing and will be managed as works proceed to prevent flooding and any accidental spillage. Upon completion of demolition works these are to be capped as required.

The Principal Contractor is to execute the works sympathetically to the surrounding environment. During the works a watching brief will be undertaken to ensure that the methods in place to control dust migration are suitable, as outlined below. Banksmen will be positioned as required during works to ensure the controls in place are suitable.

2.4. Typical Brick and Concrete Building Demolition Methodology

The concrete beam and slab roofs will initially be punctured using a pecker attachment on the excavator. The concrete beams will then be lifted off the structure, where possible, and set aside for crushing and re-use. Where the roof cannot be safely separated insitu from the supporting brickwork then it will be collapsed into the footprint of the structure and then processed once the exterior walls have been demolished.

The brickwork sections will be pulled down using the selector grab attachment for the excavator. Small sections of wall will be removed using a twisting motion to shear off the brickwork.

Dust suppression will be used at all times during the demolition of any brickwork or concrete structures. This will be in the form of a sprinkler head aimed directly at the work area. In

situations where this method isn't proving 100% effective, mist atomizer cannons will be used to create a blanket over the work area.

The riverside Pump house north and south buildings are largely low level (to the surrounding ground level) structures consisting of brick gable ends with steel sheeting roofs. The roofing will be removed first, using mechanical methods were possible, and then the brick gable ends would then be able to be removed using the method outlined above along with the dwarf side walls.

2.5. Plant & Equipment

It is anticipated that the following items of plant & equipment will be required:

- 45 & 20 tonne demolition specification excavator with various attachments (selector grab, shear, buckets, dust suppression nozzles)
- 5 tonne crushing bucket
- Various RORO Skip Wagons & 40 Yard Skips
- Various hand tools
- Bunded fuel bowsers
- Heras Fencing (2.0 metres in height)

Certification for the above plant & operative training is to be held at the work site. (Please note that this is not an exhaustive list and that plant & equipment will be provided at a frequency to deliver the works in a safe manner and in accordance with the agreed programme of works).

3. Health & Safety

3.1. Site Access and Security

The Principal Contractor is responsible for ensuring the work area is suitably segregated and secured within the site boundary and that no harm will come to members of the public or any other 3rd party. The site is located in the former TATA steel works complex which is secured by fencing and patrolled on a regular basis. It must be noted the site is in a location close to Hanson & Tarmac facilities, with associated HGV's and plant movements near this area. Contractor operations, segregation and control of the area shall be confined and limited to within the site fencing. Warning signs are to be displayed in pertinent positions leading up to the site and around the boundary perimeter fence of the site. The boundary of each demolition site is anticipated to be formed using a double clipped Heras style fence required to form a secure demolition boundary.

A site compound area will be located centrally to each of the demolition sites and will contain welfare facilities, personal vehicle and plant parking along with secure storage. The site gates shall be secured during working hours. The security of the site shall be monitored for evidence of trespass and break-ins.

The SBS work sites are to be accessed and egressed via the main STDC internal road network from the Redcar Main Site Gate entrance off the Trunk Road, public highway network.

3.2. Site Inductions & Training

All persons undertaking works on site are to be suitably trained and competent to carry out their tasks. All PC or subcontractor operatives are to hold a CSCS card as minimum and to have undertaken both demolition activities and Asbestos Cat B training.

All plant operatives are to have relevant CPCS tickets or equivalent and have suitable experience undertaking demolition activities. All persons required to work on site will undertake a full site induction prior to commencing any works. The site inductions will be carried out by the site manager and held within the site compound.

Programmed 'Toolbox Talks', 'Safety Meetings' and Briefings will be undertaken and recorded to ensure all person involved with the works continue their personal development.

3.3. COSHH

Full set of COSHH Assessments are to be held on site by the PC/ Site Managers for all materials that may be used during our works. Any new materials encountered will have a COSHH Assessment undertaken prior to commencement of use.

Burning equipment if used will consist of liquefied oxygen & propane gas, supplied in pressurised cylinders. The storage of these will be in designated security fenced areas or purpose designed security cages away from welfare and office facilities.

Fuel oil for plant will be stored in double bunded tanks, the siting of which will take into account existing site features such as drainage networks. This will ensure in the event of catastrophic failure any released liquids will be contained locally within the bunded area. Spill kits will be maintained in close proximity to fuel storage and refuelling areas. COSHH assessments are regularly checked to ensure they are relevant to the operations being carried out. This takes place at least once a year on release of the new EH40 standards (reassessed by HSE) or when operating circumstances change.

3.4. Personal Protective Equipment

The following site minimum PPE & RPE Requirements are recommended, however specific requirements are to be set out within the relevant method statements appropriate to each task.

- Cut resistant gloves
- Overalls
- Safety boots
- Light eye protection (LEP)
- Safety helmet
- Hi-vis vest/jacket or overalls.
- P3 filtered half masks

3.5. Emergency Procedures

The Teesworks site has a set of standing procedures that enables it to comply with the COMAH regulations and its COMAH Top Tier status, which include accounting for people as well a strict permit to work procedure.

The Principle Contractor will be responsible for implementing a range of emergency procedures that are to cover not only Health & Safety matters but also those of an Environmental concern as well given the proximity of works to the River Tees.

3.6. First Aid

First aid assistance is to be available from the trained first aiders on site. The PC is to confirm who these nominated individuals are and confirm they have had appropriate training.

The first aiders will be indicated on the first aid posters, which will be located around the welfare areas.

3.7. Contract Programme

It is anticipated that the works will take 4 weeks to complete but finalised timescales shall be determined by the PC once appointed for the works.

Working Hours generally – Monday to Friday 7.00am to 6.00pm

Saturday 8am to 1pm.

Sunday working is to be by prior agreement with the STDC.

Appendix A

STDC South Bank Site Enabling Works – Demolitions Riverside Structures